REMARKS

In response to the Office Action mailed April 23, 2008, Applicant respectfully requests reconsideration. To further the prosecution of this application, amendments have been made in the claims, and each of the rejections set forth in the Office Action has been carefully considered and is addressed below. The claims as presented are believed to be in condition for allowance.

Claims 1-4, 6-14 and 16-20 were previously pending in this application. Claims 1 and 11 are canceled, and claims 2-4, 8, 12-14 and 18 are amended herein. No claims are added. As a result, claims 2-4, 6-10, 12-14 and 16-20 are pending for examination, with claims 2 and 12 being independent. No new matter has been added.

Claim Rejections Under 35 U.S.C. § 103(a)

A.   Claims 2-4 and 6-10

Claims 2-4 and 6-10 are rejected under 35 U.S.C. § 103(a) as purportedly being obvious over U.S. Patent No. 5,614,687 to Yamada, *et al.* ("Yamada") in view of U.S. Patent No. 6,518,492 to Herberger, *et al.* ("Herberger"). Independent claim 2 is amended herein, and patentably distinguishes over the asserted combination.

Claim 2 has been rewritten in independent form, and now includes many of the limitations previously recited by former independent claim 1, which is cancelled. Amended claim 2 recites a tempo analyzing apparatus comprising a peak detecting means for detecting positions of a plurality of ones, higher than a predetermined threshold, of peaks of change in level of an input sound signal; a time interval detecting means for detecting a time interval between peak positions detected by the peak detecting means in a predetermined unit-time interval; an interval frequency detecting means for identifying a frequently occurring one of the time intervals detected by the time interval detecting means; and an identifying means for accumulating a frequency of occurrence of a time interval between the positions of peaks detected in a plurality of unit-time intervals and identifying the tempo of the sound to be reproduced with the sound signal on the basis of a maximum one among all the accumulated frequency of occurrence.

The asserted combination fails to satisfy the totality of limitations recited by amended claim 2, as neither Yamada nor Herberger discloses or suggests an identifying means for accumulating a frequency of occurrence of each time interval between peak positions detected in a plurality of unit-time intervals, or identifying a tempo of sound to be reproduced with a sound signal on the basis of a maximum one among all the accumulated frequency of time interval occurrence.

Yamada discloses identifying a beats per minute (BPM) of an input sound signal by detecting an interval which begins when the sound signal first reaches a high level and ends when the sound signal again reaches the high level, and calculating the BPM based on the detected interval (col. 3, lines 57-63). In particular Yamada discloses that when a sound signal is received, a maximum value of the signal is detected, and a slice level equal to 75% of the maximum value is calculated (col. 3, lines 23-29). Thereafter, the output of a band pass filter (BPF) is compared to the slice level, and a reset is generated when the output of the BPF exceeds the slice level (col. 3, lines 31-46). When a reset occurs, an interval T1 has begun (col. 3, lines 36-41). During the interval T1, the system determines when the output of the BPF first becomes a high level, and then stops the measurement when the BPF output again reaches the high level (col. 3, lines 58-62). The interval between the first and second time that the signal reaches the high level is used to calculate the BPM (col. 3, lines 62-64). Thus, Yamada discloses calculating the BPM based on a single detected time interval. Yamada simply says nothing relating to accumulating a frequency of occurrence of each time interval between peak positions in a plurality of unit-time intervals, or to identifying a tempo on the basis of a maximum one among all the accumulated frequencies of time interval occurrence.

Herberger also fails to disclose or suggest accumulating a frequency of occurrence of each time interval between peak positions in a plurality of unit-time intervals. Herberger discloses a technique for determining the tempo of a musical work that allows for user participation in the BPM determination (Abstract). Specifically, BPM estimates are determined using at least two different algorithms, producing a plurality of BPM candidates (Abstract). The user provides input to select the "best" BPM from among the candidates (Abstract). Herberger simply says nothing at all relating to an accumulation of a frequency of occurrence of each time interval between peak positions in a plurality of unit-time

intervals, and so Herberger necessarily fails to say anything relating to identifying a tempo of sound on the basis of a maximum one among all the accumulated frequencies of time interval occurrence.

As a result, amended claim 2 patentably distinguishes over the asserted combination, such that the rejection of claim 2, and of the claims that depend therefrom, under 35 U.S.C. § 103(a) as purportedly being obvious over Yamada in view of Herberger should be withdrawn.

B.   Claims 12-14 and 16-20

Claims 12-14 and 16-20 are rejected under 35 U.S.C. § 103(a) as purportedly being obvious over Yamada in view of Herberger, and further in view of U.S. Patent No. 6,140,565 to Yamauchi, *et al.* ("Yamauchi"). Independent claim 12 is amended herein, and patentably distinguishes over the asserted combination.

Claim 12 is amended to recite many of the limitations previously recited by former independent claim 11, which is canceled. Like claim 2, claim 12 includes limitations directed to accumulating a frequency of occurrence of each time interval between peak positions detected in a plurality of unit-time intervals, and identifying a tempo of sound to be reproduced on a basis of a maximum one among all the accumulated frequencies of time interval occurrence. As discussed above with reference to claim 2, neither Yamada nor Herberger satisfies these limitations.

Yamauchi fails to remedy this deficiency of Yamada and Herberger. Yamauchi discloses a system for displaying a visual image (e.g., a picture of a scenery setting) to match an acoustic effect, accompaniment style, etc. associated with a musical piece so that the image creates visual imagery of an environment in which the musical piece may be played (Abstract). Yamauchi says nothing at all relating to analyzing tempo, and certainly says nothing relating to accumulating a frequency of occurrence of each time interval between peak positions detected in a plurality of unit-time intervals. Yamauchi thus necessarily fails to disclose or suggest identifying a tempo of sound to be reproduced on a basis of a maximum one among all the accumulated frequencies of time interval occurrence.

As such, claim 12 patentably distinguishes over the asserted combination, such that the rejection of claim 12, and of the claims that depend therefrom, under 35 U.S.C. § 103(a) as purportedly being obvious over Yamada in view of Herberger and further in view of Yamauchi should be withdrawn.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: 6 - 23 - 08

Respectfully submitted,

By _Randy J. Pritzker_

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